

Cancel claim 9 and combine into claim 1:

1. (Currently amended) A method of transmitting data packets (DAT) by way of a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU) in which the data packets (DAT) are packed into synchronous transport modules (STM-N), comprising the steps of

 using subunits (VC) of synchronous transport modules (STM-N) of the same size in order to establish logical virtual connections between network elements (NE1 - NEn, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network (SDH),

 entering the virtual connections (LV1-LV4) into an address table (TAB),

 in at least one part of the network elements (NE1 - NEn, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network, evaluating the target address (ZAD) of the data packets (DAT) ~~and~~,

 at least for a part of the data packets (DAT) from at least one of the network elements of the synchronous digital data transmission network, on the basis of the address table (TAB) and the target address (ZAD), deciding which one of the virtual connections (LV1 - LV4) to use to transmit this data packet, and

re-establishing the virtual connections at predetermined time intervals by using a central network management system.

2. (Original) The method according to claim 1, in which the data packets (DAT) come from a local area network (LAN).

3. (Previously presented) The method according to claim 1, in which the data packets (LAN) are structured in accordance with the Internet Protocol.

4. (Previously presented) The method according to claim 1, in which

the target address (ZAD) is comprised of a network address (NAD) and a host address (HAD) and only the network address (NAD) is evaluated in intermediate network elements.

5. (Previously presented) The method according to claim 1, in which

a respective address table (TAB) is stored in each network element and is prepared by a central network management system (TMN-IP).

6. (Previously Presented) A method of transmitting data packets (DAT) by way of a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU) in which the data packets (DAT) are packed into synchronous transport modules (STM-N), comprising the steps of

using subunits (VC) of synchronous transport modules (STM-N) of the same size in order to establish logical virtual connections between network elements (NE1 - NEn, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network (SDH),

entering the virtual connections (LV1-LV4) into an address table (TAB),

in at least one part of the network elements (NE1 - NEn, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network, evaluating the target address (ZAD) of the data packets (DAT),

at least for a part of the data packets (DAT) from at least one of the network elements of the synchronous digital data transmission network, on the basis of the address table (TAB) and the target address (ZAD), deciding which one of the virtual connections (LV1 - LV4) to use to transmit this data packet; and automatically preparing the address table (TAB) in a network element, by recording the target addresses (ZAD) and the source addresses of incoming and outgoing data packets (DAT).

7. (Previously Presented) The method according to claim 6, in which a number of network elements synchronize their address tables (TAB).

8. (Previously Presented) The method according to claim 7, further comprising synchronizing the address tables (TAB) via a service channel.

9. (Cancelled)

10. (Currently Amended) A method of transmitting data packets (DAT) by way of a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU) in which the data packets (DAT) are packed into synchronous transport modules (STM-N), comprising the steps of
using subunits (VC) of synchronous transport modules (STM-N) of the same size in order to establish logical virtual connections between network elements (NE1 - NEn, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network (SDH),
entering the virtual connections (LV1-LV4) into an address table (TAB),
in at least one part of the network elements (NE1 - NEn, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network, evaluating the target address (ZAD) of the data packets (DAT),
at least for a part of the data packets (DAT)
from at least one of the network elements of the synchronous digital data transmission network, on the basis of the address table (TAB) and the target address (ZAD), deciding which one of the virtual connections (LV1 - LV4) to use to transmit this data packet, and
~~The method according to claim 1, further comprising~~
 establishing a new, fixed, logical connection at the instigation of a network element if the number of data packets to be transmitted, which have the same target address or a group of neighboring target addresses, exceeds a threshold value.

11. (Previously Presented) The method according to claim 1, further comprising detecting sequences of data packets with the same source address and target address and handling such packets the same.

12. (Previously Presented) The method according to claim 1, further comprising

using a network element, disposed at a transfer point to the synchronous digital data transmission network, to make a decision as to which one of the virtual connections to use to transmit a data packet.

Combine claim 16 into parent claim 13:

13. (Currently Amended) A network element (NE) for a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU), comprising
an interface (IN) by way of which the network element receives data packets with a target address, a memory (MEM) in which an address table (TAB) is stored, which table has entries regarding logical virtual connections between network elements of the synchronous digital data transmission network (SDH), the network element being a compressor (COMP1, COMP2) which only repacks incoming subunits of synchronous transport modules into second, outgoing, smaller subunits of synchronous transport modules if the incoming subunits are not fully packed,

means (IPADR) for evaluating the target address of data packets, and

means (SEL) for making a decision, on the basis of the target address and the address table, as to which one of the virtual connections to use to transmit a data packet.

Cancel claims 14-16.

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)